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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,719	07/22/2003	Richard D. Roberts	XSI.062 / 10X-200	4933

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EXAMINER	
TRAN, KHANH C	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,719	ROBERTS, RICHARD D.	
	Examiner	Art Unit	
	Khanh Tran	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6,10, and 14-16* is/are rejected.

7)☒ Claim(s) *3-5,7-9 and 11-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Preliminary Amendment filed on 01/30/2004 has been entered. Claims 1-16 are pending in this Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 6, 10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odman et al. U.S. Patent 7,120,126 B2.

Regarding claim 1, Odman et al. invention is directed to a method for improving the ability of devices in a network to determine the current quality of the transmission media.

In column 9 lines 1-30, see also FIG. 3, Odman et al. discusses a preamble is used at the beginning of each frame transmitted between two devices 310, 320 for receiver acquisition. The preamble allows the receiving device to lock onto and synchronize with the transmitting device, and to train itself so that it knows how to extract the modulated payload out of the frame. Depending upon the media quality and the transmission parameters, this preamble could be varied in length. Odman et al. further elaborates if the media conditions were such that signal quality was poor, a longer preamble might be needed to allow more time to prepare the receiver to process

the incoming frame. And if, however, the media conditions were good such that signal quality was poor, the frame could afford a shorter preamble.

In column 11 lines 55-67, Odman et al. teaches that receiving device 310, 320 could also fall back to more conservative parameters (e.g., a long preamble) if a transmission using less conservative parameters (e.g., a short preamble) does not pass successfully. In other words, if a receiving device 310, 320 cannot successfully receive a frame using parameters from its database, then the receiving device 320 could change to use more conservative parameters, despite what the relevant entry in the database says.

In light of the Odman et al. aforementioned teachings, Odman et al. impliedly employs either a short or a long preamble for an initial synchronization using parameters in the database. If the frame is not successfully received, the receiving device 320 could change to use more conservative parameters.

Odman et al. does not explicitly teach the step of evaluating the incoming signals to determine whether second signal parameters are met.

However, as recited above, because Odman et al. teaches the act of using more conservative parameters resulting receiving frame successfully, one of ordinary skill in the art at the time the invention was made would have recognized that the act of using more conservative parameters resulting receiving frame successfully would corresponds to the claimed step of evaluating the incoming signals to determine whether second signal parameters are met.

Odman et al. does not expressly teaches using a default acquisition preamble, a first alternate acquisition preamble and a second alternate acquisition preamble.

In column 12 lines 3-10, because Odman et al. further suggests alternate embodiments could use multiple preamble lengths using the same mechanism and such embodiments would have to provide multiple thresholds for determining which preambles to assigned to each device, for that reason, it would have been obvious for one of ordinary skill in the art at the time the invention was made that Odman et al. teachings can be modified to employ three preambles for various conditions.

Regarding claim 2, as recited in claim 1 rejection, Odman et al. teaches using long and short preambles.

Odman et al. does not teach using a normal acquisition preamble, whose period is longer than the short synchronization period of the short preamble and shorter than the long synchronization period of the long preamble as set forth in the application claim.

Nevertheless, as recited in claim 1 rejection, because Odman et al. further suggests alternate embodiments could use multiple preamble lengths using the same mechanism and such embodiments would have to provide multiple thresholds for determining which preambles to assigned to each device, for that reason, it would have been obvious for one of ordinary skill in the art at the time the invention was made that Odman et al. teachings can be modified to employ a normal preamble having a normal synchronization period as claimed in the application claim.

Regarding claim 6, claim is rejected on the same ground as for claim 2 because of similar scope. Furthermore, selection of a default preamble, a first alternate preamble and a second alternate preamble are of design choice according to Odman et al. invention since Odman et al. further suggests alternate embodiments could use multiple preamble lengths using the same mechanism and such embodiments would have to provide multiple thresholds for determining which preambles to assigned to each device.

Regarding claim 10, claim is rejected on the same ground as for claim 6 because of similar scope.

Regarding claim 14, Odman et al. further teaches the disclosed system and method can be used with any wireless network, e.g. a network based on the IEEE 802.15.3 standard, or any other protocol in which the quality of the media needs to be known. However, the null frame transmissions make it particularly suitable for ultra-wide bandwidth (UWB) signals; see column 8 lines 4-50.

Regarding claim 15, claim is rejected on the same ground as for claim 6 because of similar scope. Furthermore, as recited in claim 1 rejection, Odman et al. further elaborates if the media conditions were such that signal quality was poor, a longer preamble might be needed to allow more time to prepare the receiver to process the incoming frame. And if, however, the media conditions were good such that signal

quality was poor, the frame could afford a shorter preamble. In view of that, different length preambles have different synchronization periods. Furthermore, in column 10 lines 15-25, Odman et al. further teaches that based on an analysis of one or more incoming signals from each device, each other device can determine certain signal quality parameters, e.g., signal-to-noise ratios (SNR). These values are preferably stored in a table in each device that indicates the relative SNR of each other device in the network 300. In view of the foregoing, the SNRs are mutually exclusive.

Regarding claim 16, claim is rejected on the same ground as for claim 14 because of similar scope.

Allowable Subject Matter

3. Claims 3-5, 7-9 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mill U.S. Patent 7,003,063 B2 discloses "Detecting Preambles Of Data Packets".

Raphaeli et al. U.S Patent 6,614,864 B1 "Apparatus For And Method Of Adaptive Synchronization In A Spread Spectrum Communication Receiver".

Best et al. U.S. Patent 5,297,185 discloses "Pattern Detection And Synchronization Circuit".

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

Khanh Tran 12/08/06

Khanh Tran
Primary Examiner